

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (currently amended) A compression method for [modulating binary information from a binary information stream onto a carrier] modulation systems using integer cycle or impulse modulation on a carrier comprising the steps of:

[generating a carrier at a select carrier frequency such that said carrier has a waveform with a continuous sequence of wavelets with similar amplitudes;

said wavelets being defined by a 360 degree cycle between crossover positions of said carrier waveform;

said crossover positions representing a substantially zero energy level;]

grouping [said] wavelets of the carrier into wavelet groups containing two or more wavelets;

receiving [said] an information stream as a binary data sequence of first and second binary states;

grouping said binary data sequence of first and second binary states into binary groups of two or more first and second binary states;

correlating one of each said wavelets in said wavelet groups with one of each possible binary values of each said binary groups; and,

modulating said carrier in accordance with said binary data sequence by altering the amplitude, [or] frequency, or phase of the one of each said wavelets in said wavelet groups corresponding to one of each said binary values of said binary groups resulting in a compressed binary modulated carrier.

2. (original) The method of claim 1 wherein:

the modulating of said carrier is carried out by altering the amplitude, [or] frequency, or phase of said wavelets while minimizing sideband distortions of said carrier.

3. (canceled) [The method of claim 1 wherein:
the generation of said carrier is accomplished by a local oscillator having an oscillator
output at a select carrier frequency.]

[4] 3. (currently amended) The method of claim 1 comprising the additional step of:
reducing of harmonics produced from modulating said carrier by filtering said
compressed binary modulated carrier.

[5] 4. (currently amended) The method of claim 1 comprising the additional step of:
broadcasting said compressed binary modulated carrier.

[6] 5. (currently amended) The method of claim [5] 4 wherein:
broadcasting said compressed binary modulated carrier is accomplished using a Time
Division Multiple Access system.

[7] 6. (currently amended) The method of claim [5] 4 wherein:
broadcasting said compressed binary modulated carrier is accomplished using a
Frequency Division Multiple Access system.

[8] 7. (currently amended) A method for [demodulating] decompressing compressed
binary information that was derived from a binary information stream composed of a binary data
sequence of first and second binary states that was integer cycle or impulse modulated onto a
carrier [which has a waveform with a continuous sequence of wavelets with similar amplitudes
defined by a 360 degree cycle between crossover positions representing a substantially zero
energy level] in which the carrier has been modulated in accordance with said binary data
sequence by grouping said wavelets into wavelet groups containing two or more wavelets;
receiving said information stream as a binary data sequence of first and second binary states;
grouping said binary data sequence of first and second binary states into binary groups of two or
more first and second binary states; correlating one of each said wavelets in said wavelet group
with one of each possible binary values of each said binary groups; and modulating said carrier

in accordance with said binary data sequence by altering the amplitude, [or] frequency, or phase of the one of each said wavelets in said wavelet groups corresponding to one of each said binary values of said binary groups resulting in a compressed binary modulated carrier which was broadcasted comprising the steps of:

receiving said broadcasted compressed binary modulated carrier;

demodulating and decompressing said compressed binary modulated carrier by detecting the respective amplitude, [or] frequency, or phase of said wavelets to identify said altered wavelets in said wavelet groups and correlating to said binary values of said binary groups ; and,

reconstructing said binary data sequence from said binary values of said binary groups resulting in regeneration of said information stream.

[9] 8. (currently amended) The method of claim [8] 7 wherein:

broadcasting and receiving said compressed binary modulated carrier is accomplished using a Time Division Multiple Access system.

[10] 9. The method of claim [8] 7 wherein:

broadcasting and receiving said compressed binary modulated carrier is accomplished using a Frequency Division Multiple Access system.

[11] 10. (currently amended) A compression and decompression method for [transmitting compressed binary information from a binary information stream over a carrier, receiving the compressed binary modulated carrier, and converting the transmitted binary information back into an information stream] modulation systems using integer cycle or impulse modulation on a carrier comprising the steps of:

[generating a carrier at a select carrier frequency such that carrier has a waveform with a continuous sequence of wavelets with similar amplitudes;

said wavelets being defined by a 360 degree cycle between crossover positions of said radio frequency carrier waveform;

said crossover positions representing a substantially zero energy level;]

grouping [said] wavelets of the carrier into wavelet groups containing two or more wavelets;

receiving [said] an information stream as a binary data sequence of first and second binary states;

grouping said binary data sequence of first and second binary states into binary groups of two or more first and second binary states;

correlating one of each said wavelets in said wavelet group with one of each possible binary values of each said binary groups; and,

modulating said carrier in accordance with said binary data sequence by altering the amplitude, [or] frequency, or phase of the one of each said wavelets in said wavelet groups corresponding to one of each said binary values of said binary groups resulting in a compressed binary modulated carrier;

broadcasting said compressed binary modulated carrier;

receiving said compressed binary modulated carrier;

demodulating and decompressing said compressed binary modulated carrier by detecting the respective amplitude, [or] frequency, or phase of said wavelets to identify said altered wavelets in said wavelet groups and correlating to said binary values of said binary groups ; and,

reconstructing said binary data sequence from said binary values of said binary groups resulting in regeneration of said information stream.

[12] 11. (currently amended) The method of claim [11] 10 wherein:

the modulating of carrier is carried out by altering the amplitude, frequency or [amplitude] phase of said wavelets while minimizing sideband distortions of said carrier.

13. (cancelled) [The method of claim 11 wherein:

the generation of said carrier is accomplished by a local oscillator having an oscillator output at a select carrier frequency.]

[14] 12. (currently amended) The method of claim [11] 10 comprising the additional step of:

reducing of harmonics produced by modulating said carrier by filtering said carrier.

[15] 13. (currently amended) The method of claim [11] 10 wherein:

broadcasting and receiving said compressed binary modulated carrier is accomplished using a Time Division Multiple Access system.

[16] 14. The method of claim [11] 10 wherein:

broadcasting and receiving said compressed binary modulated carrier is accomplished using a Frequency Division Multiple Access system.